Brain Drain, Brain Gain or Somewhere in the Middle? "Rethinking" Talent Attraction and Retention from a Sticky State Perspective

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Some Observations on Data Driven Educational Programs for Policy Makers, Economic Developers and other Stakeholders

- Many issues in our communities are driven by emotion rather than a rational understanding of conditions. *Do not use data as a means of dismissing these emotions.*

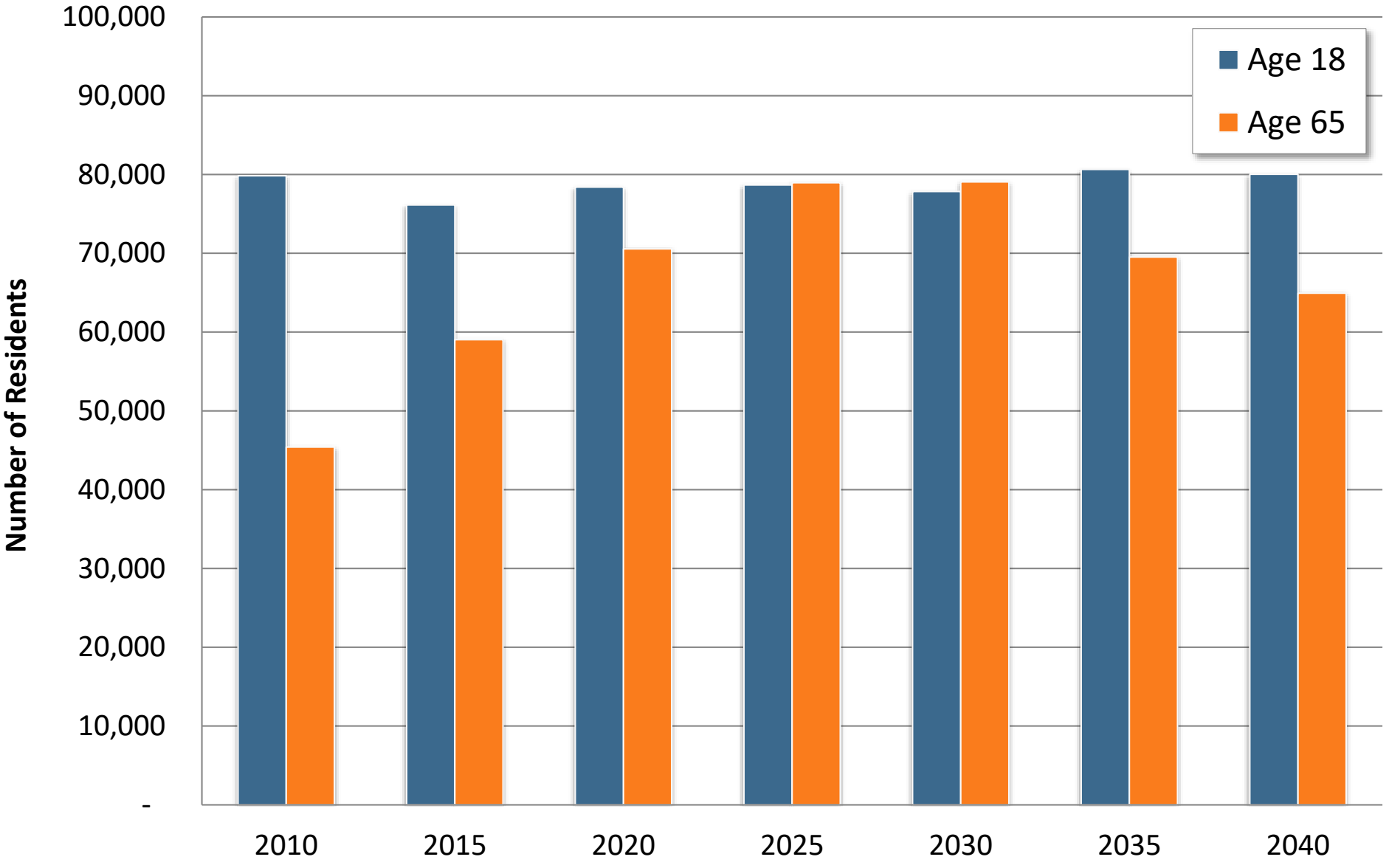
- Data is useful in stimulating discussion, challenging perceptions and identifying strengths and weaknesses. *Nonetheless, do not expect one data point or a single presentation to immediately change mindsets, create consensus or find an answer.*

- Be forthcoming with the strengths and weaknesses of data sets.

- Speak their language – Relying on regression results, spatial statistics, academic jargon, etc. is a fast-track to losing the attention of your audience. *However, this does not mean that your programming should ignore these types of tools or should not be rooted in peer-reviewed research.*

- Have a framework for telling a story with the data (i.e. a storyboard).

Projected Convergence of the Population Age 18 and Age 65 in the State of Wisconsin – 2010 to 2040



Data Source: Wisconsin Department of Administration and Author's Calculations

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Some Suggested Responses from Various Stakeholder Groups in Wisconsin

- Emphasis on retention – We need to do a better job of keeping people in the state.
- Financial incentives – Scholarships with post-graduation residency requirements; tax breaks or student loan repayment for college graduates who live in the state for a pre-determined amount of time;
- Social capital development strategies – Internships, young professionals organizations; YP week, etc.
- Broad calls for developing “high paying” jobs for college graduates;
- Responses are largely in line with those summarized by Groen (2011)

How Can we Better Understand College Graduate Migration and Develop Appropriate Policies? *A Data-Driven Framework*

- *Migration Dynamics* - Often, there is a sole focus on net migration. Net-migration, out-migration, in-migration and gross migration rates need to be considered.

- *Timeframe* – Migration patterns should consider historical perspectives in addition to a single period in time.

- *Structural Conditions* – Industry composition, labor market thickness, natural amenities, etc.

- *Social and Cultural Factors* – Diversity and personal/household characteristics of in-migrants, out-migrants and non-migrants.

- Based on Masey (1990); Voss, Hammer & Meier (2001); Florida (2002); Deitz (2007); Verdugo and Young (2007); Gottlieb (2011); Fiore et al (2015), among others.

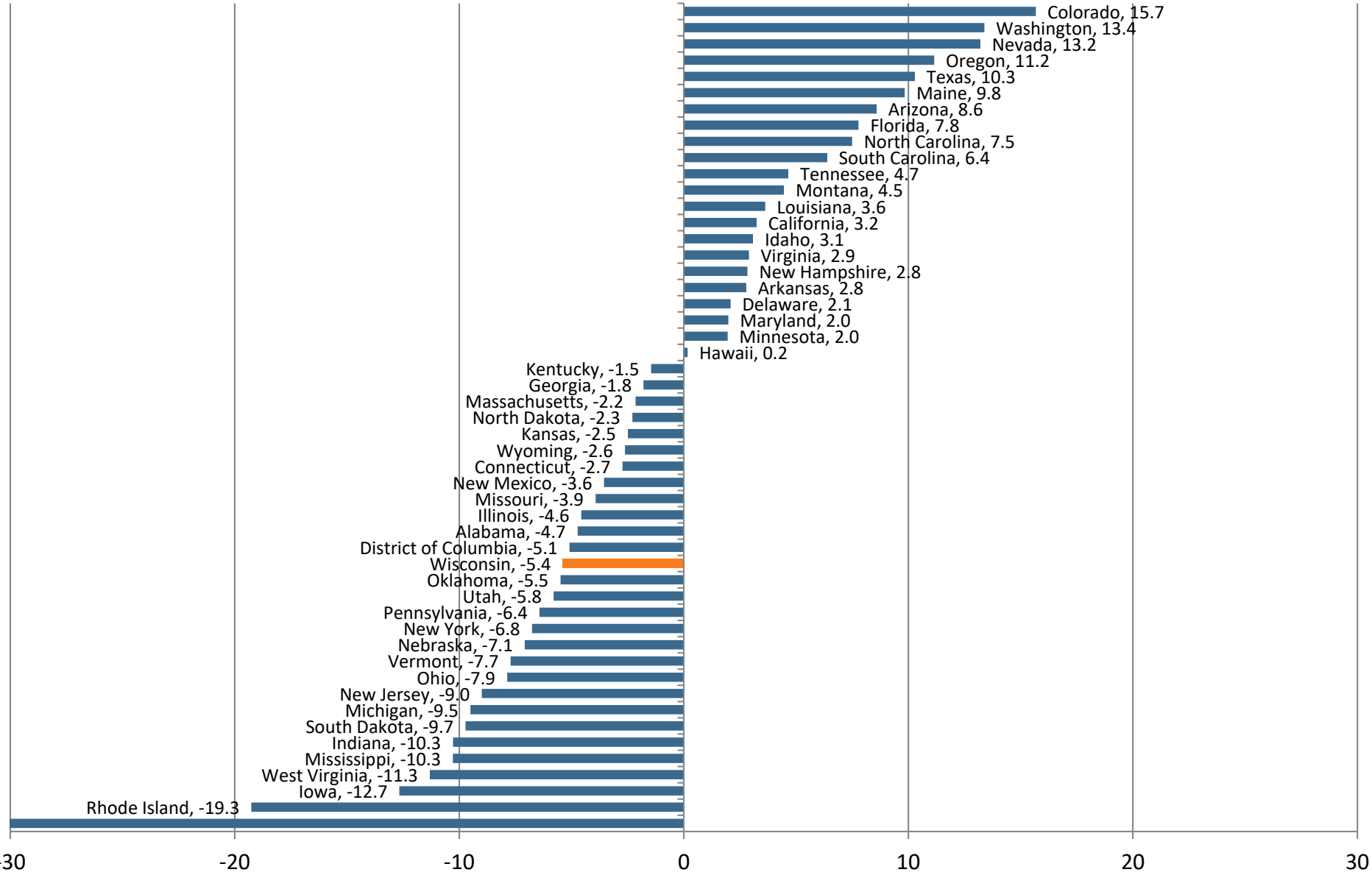
WI Domestic Net Migration of College Graduates by Age (2011-2015)

Age Group	In-Migration to Wisconsin	Out-Migration from Wisconsin	Net Migration
18 to 24	6,756	8,221	-1,465
25 to 29	6,757	10,258	-3,501
30 to 34	4,655	5,345	-690
35 to 39	3,202	2,610	592
40 to 44	1,958	1,747	211
45 to 49	1,571	1,468	103
50 to 54	1,390	1,492	-102
55 to 59	1,172	1,373	-201
60 to 64	1,391	1,492	-101
65 to 69	674	1,213	-539
70 to 74	345	608	-263
75 and Over	693	792	-99
Total	30,564	36,619	-6,055

Source: U.S. Census Bureau 2011-2015 American Community Survey PUMS and Author's Calculations – Extracted from IPUMS

Values are subject to margins of error.

Domestic Net Migration Rate (2011-2015 5-Year Estimates)
Per 1,000 Population Age 18 to 64 with a Bachelor's Degree or Higher



Source: U.S. Census Bureau 2011-2015 American Community Survey PUMS and Author's Calculations – Extracted from IPUMS

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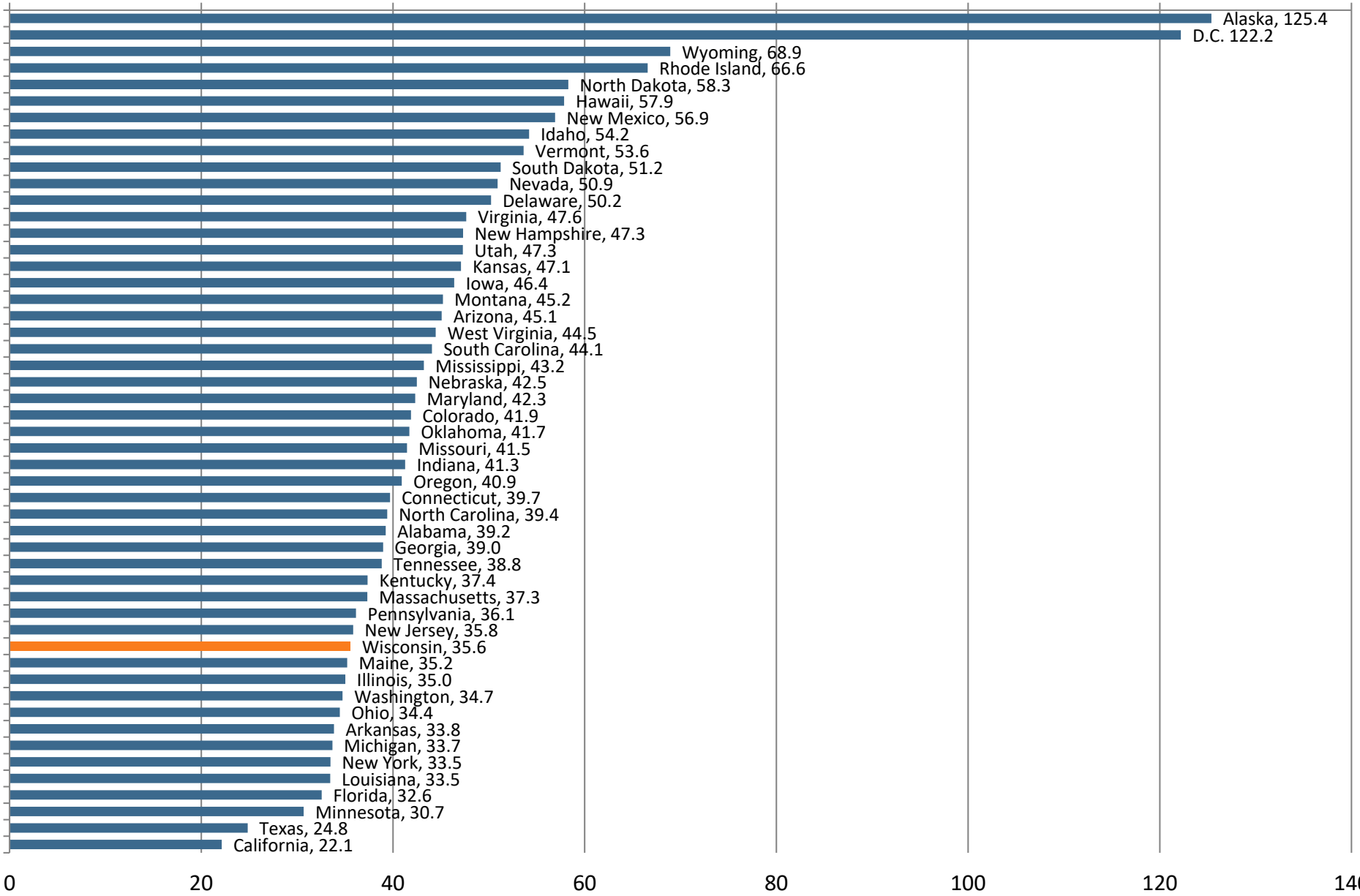
Domestic Out-Migration Rate (2011-2015 5-Year Estimates)
Per 1,000 Population Age 18 to 64 with a Bachelor's Degree or Higher



Source: U.S. Census Bureau 2011-2015 American Community Survey PUMS and Author's Calculations – Extracted from IPUMS

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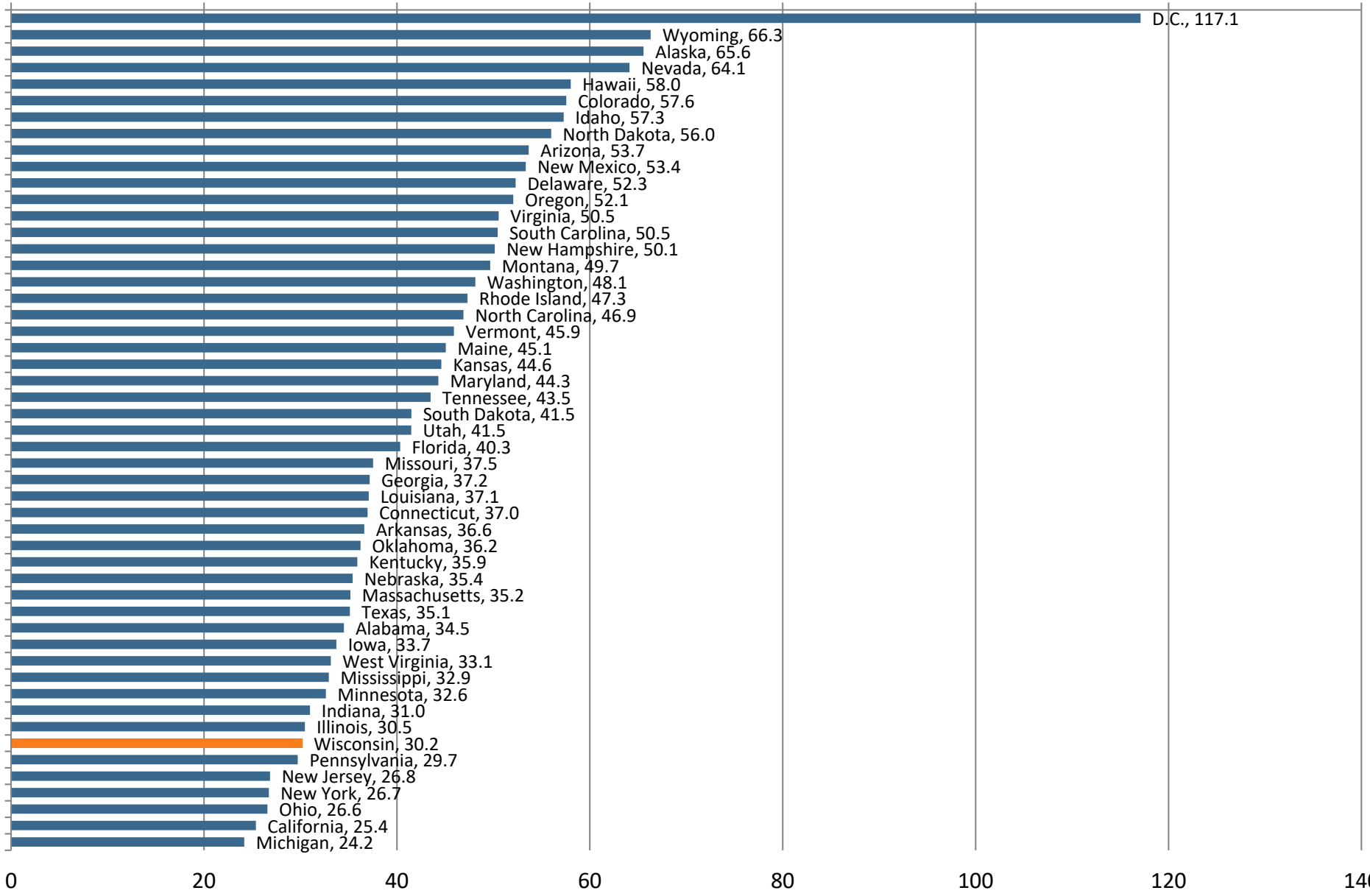
Domestic In-Migration Rate (2011-2015 5-Year Estimates)
Per 1,000 Population Age 18 to 64 with a Bachelor's Degree or Higher



Source: U.S. Census Bureau 2011-2015 American Community Survey PUMS and Author's Calculations – Extracted from IPUMS

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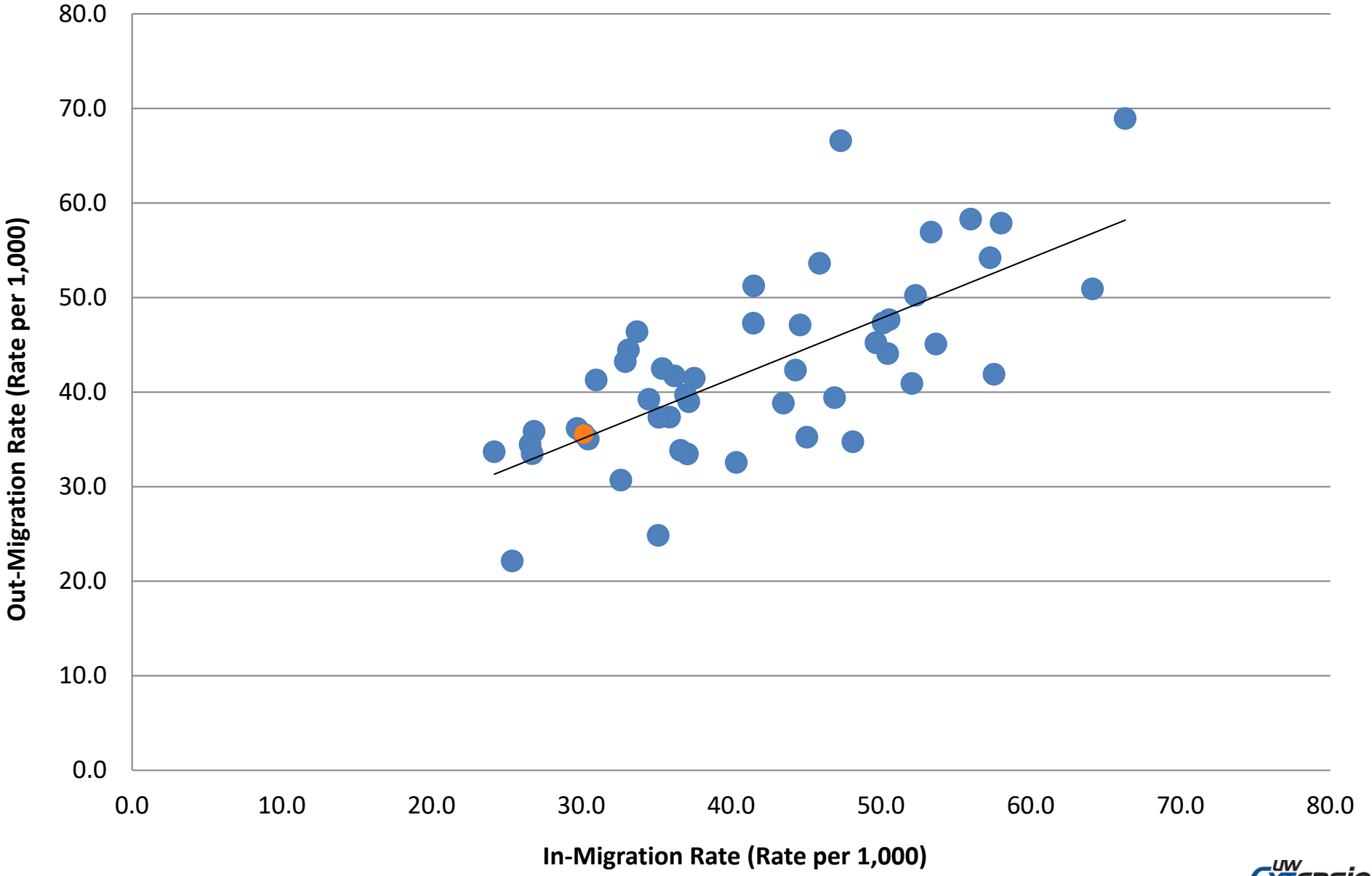
Migration Dynamism – Correlation between In-Migration Rates and Out-Migration Rates for the Population Age 18 to 64 with a Bachelor's Degree or Higher (2011-2015 5 Year Estimates)



Source: U.S. Census Bureau 2011-2015 American Community Survey PUMS and Author's Calculations – Extracted from IPUMS

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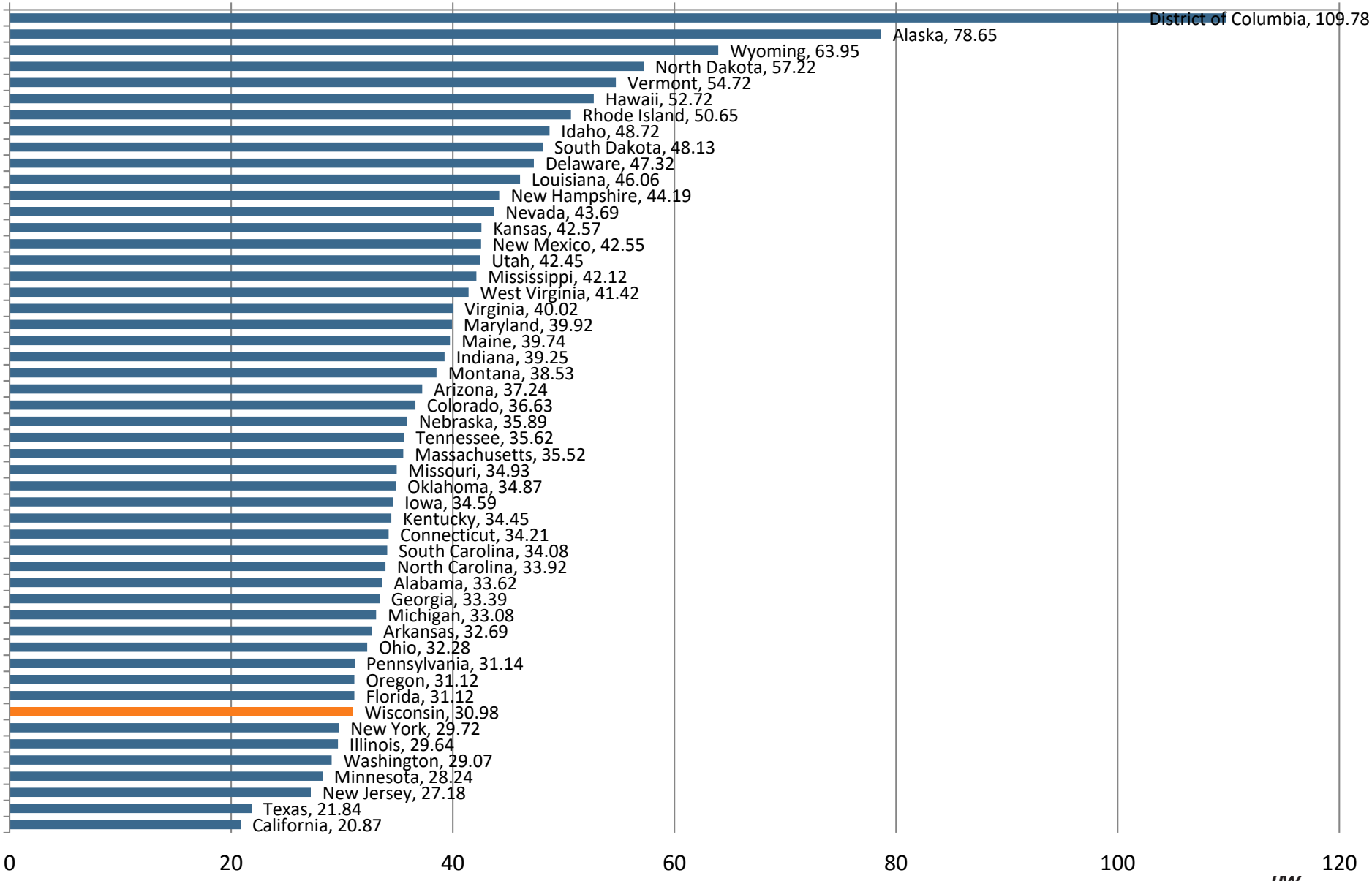
Domestic Out-Migration Rate (2005-2009 5-Year Estimates)
Per 1,000 Population Age 18 to 64 with a Bachelor's Degree or Higher



Source: U.S. Census Bureau 2005-2009 American Community Survey PUMS and Author's Calculations – Extracted from IPUMS

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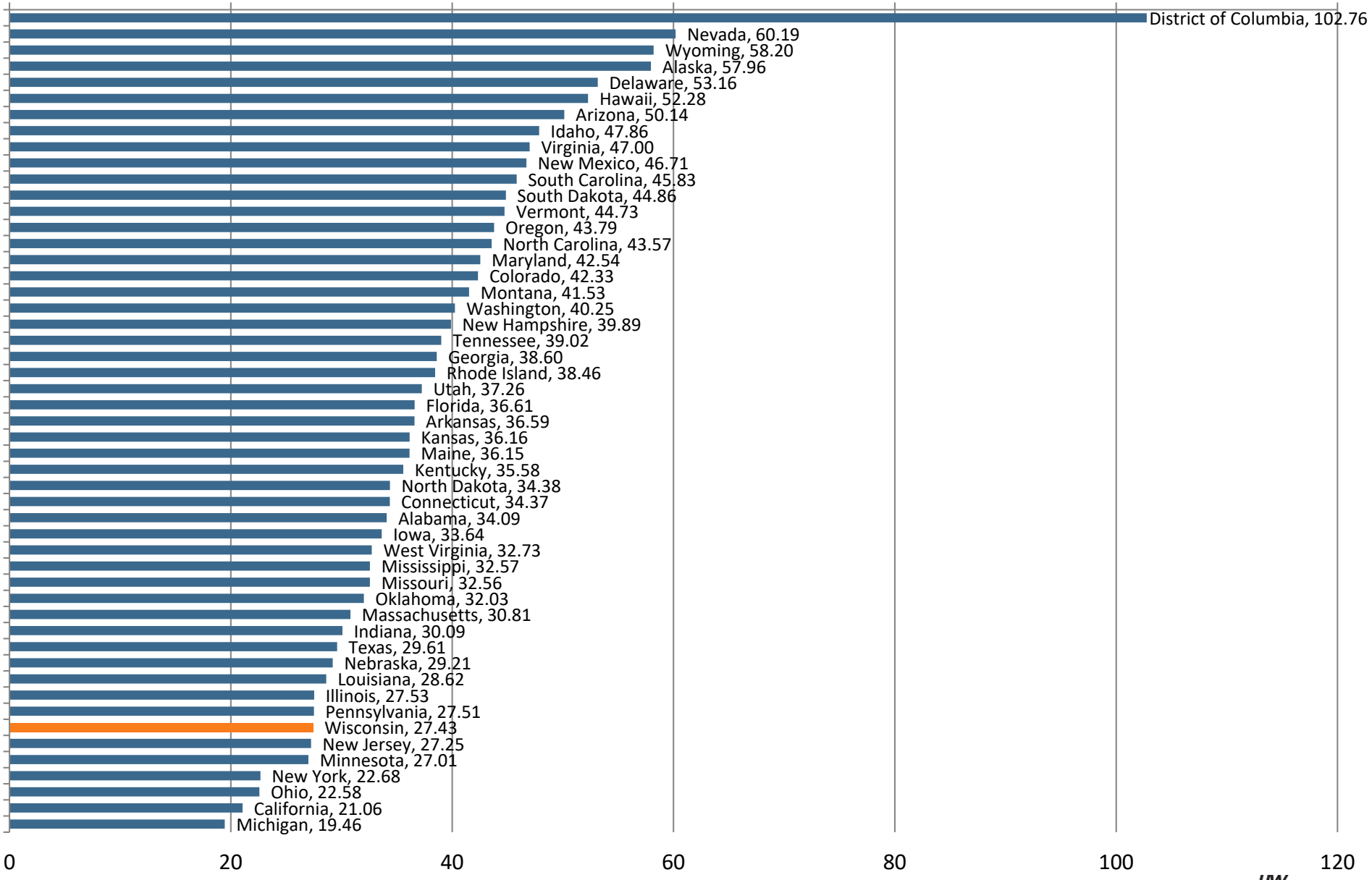

Source: U.S. Census Bureau 2005-2009 American Community Survey PUMS and Author's Calculations – Extracted from IPUMS

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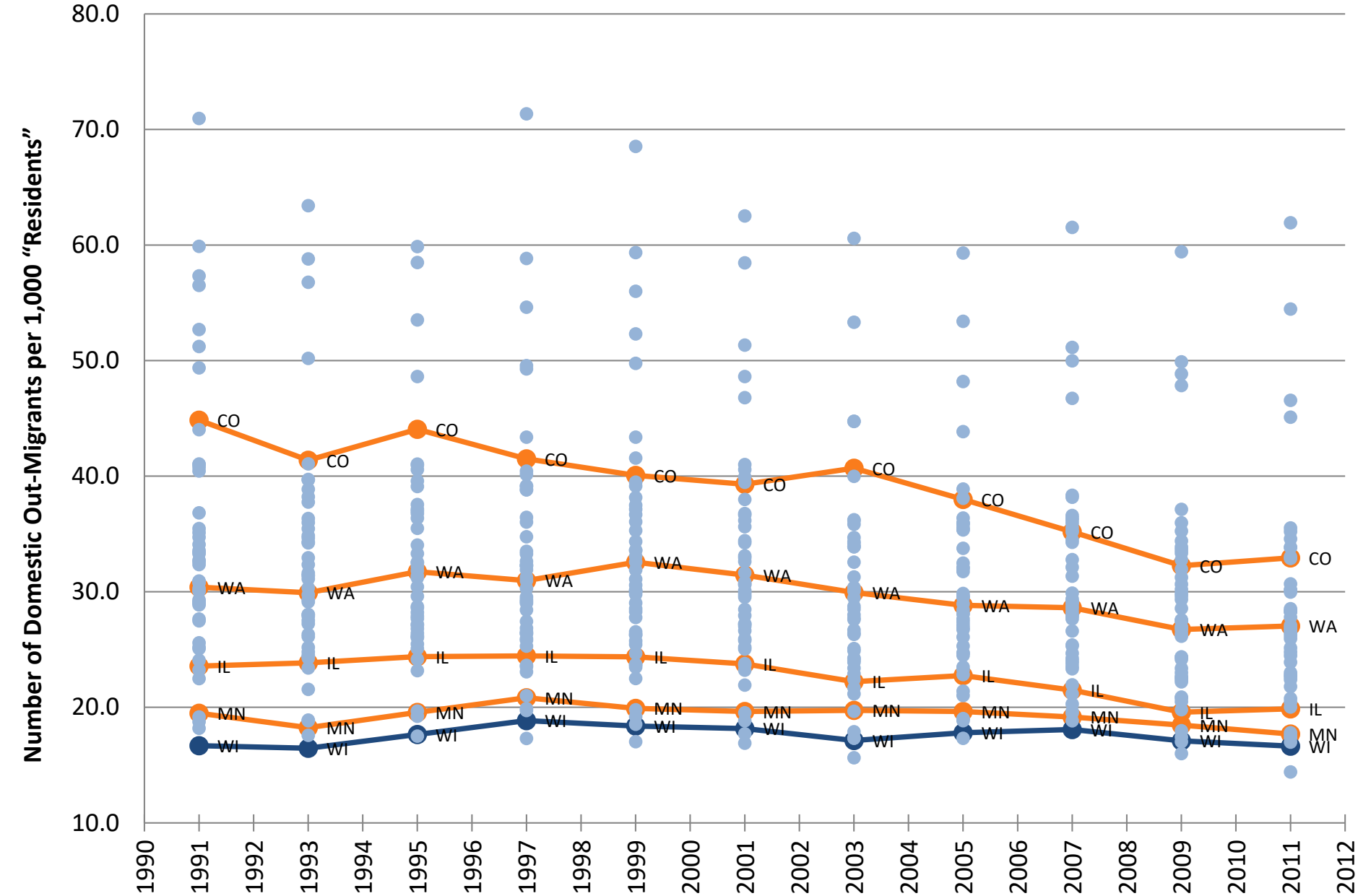
State Domestic Out-Migration Rates - 1990 to 2011



Source: Internal Revenue Service Migration Data and Author's Calculations

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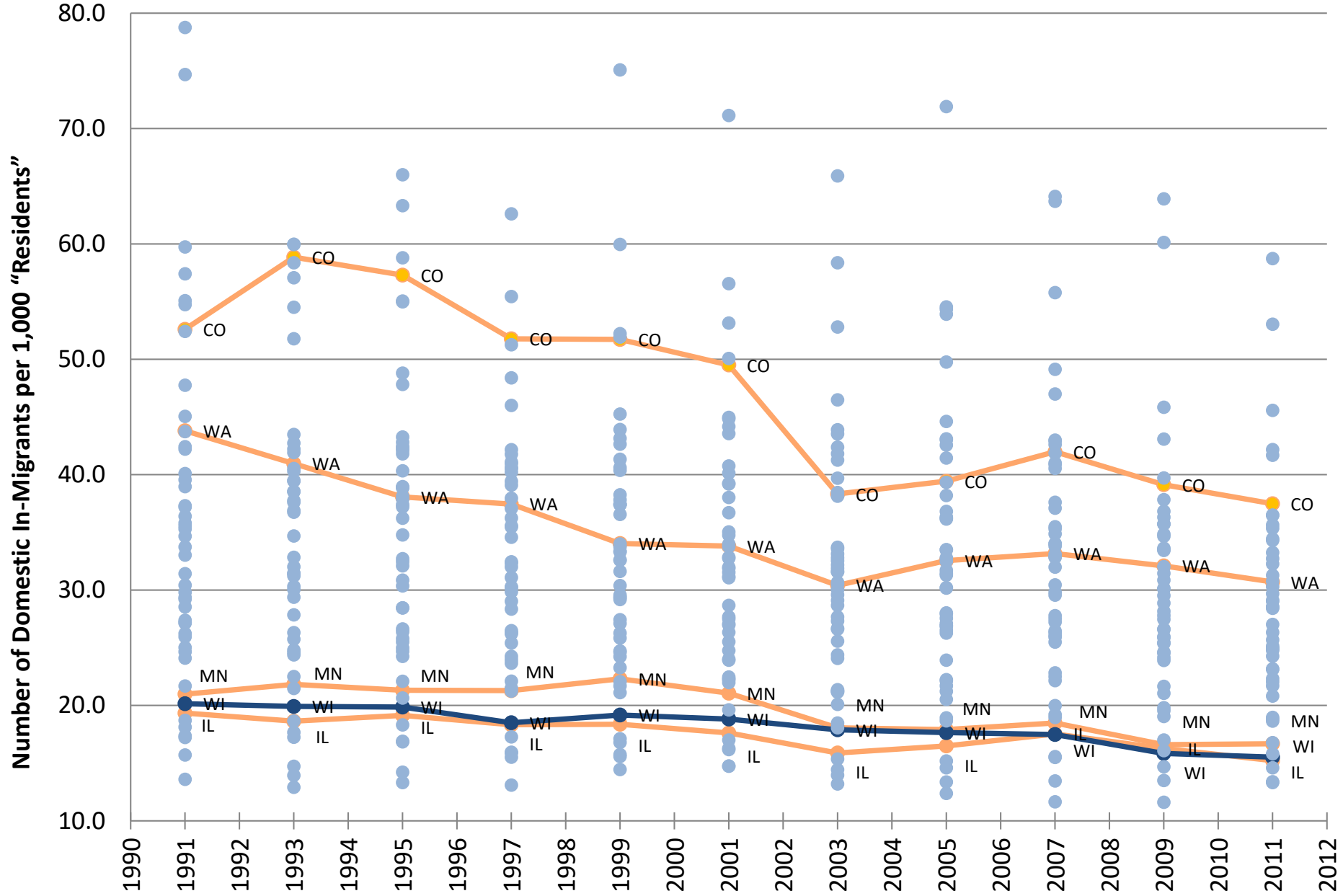
Domestic State In-Migration Rates - 1990 to 2011



Source: Internal Revenue Service Migration Data and Author's Calculations

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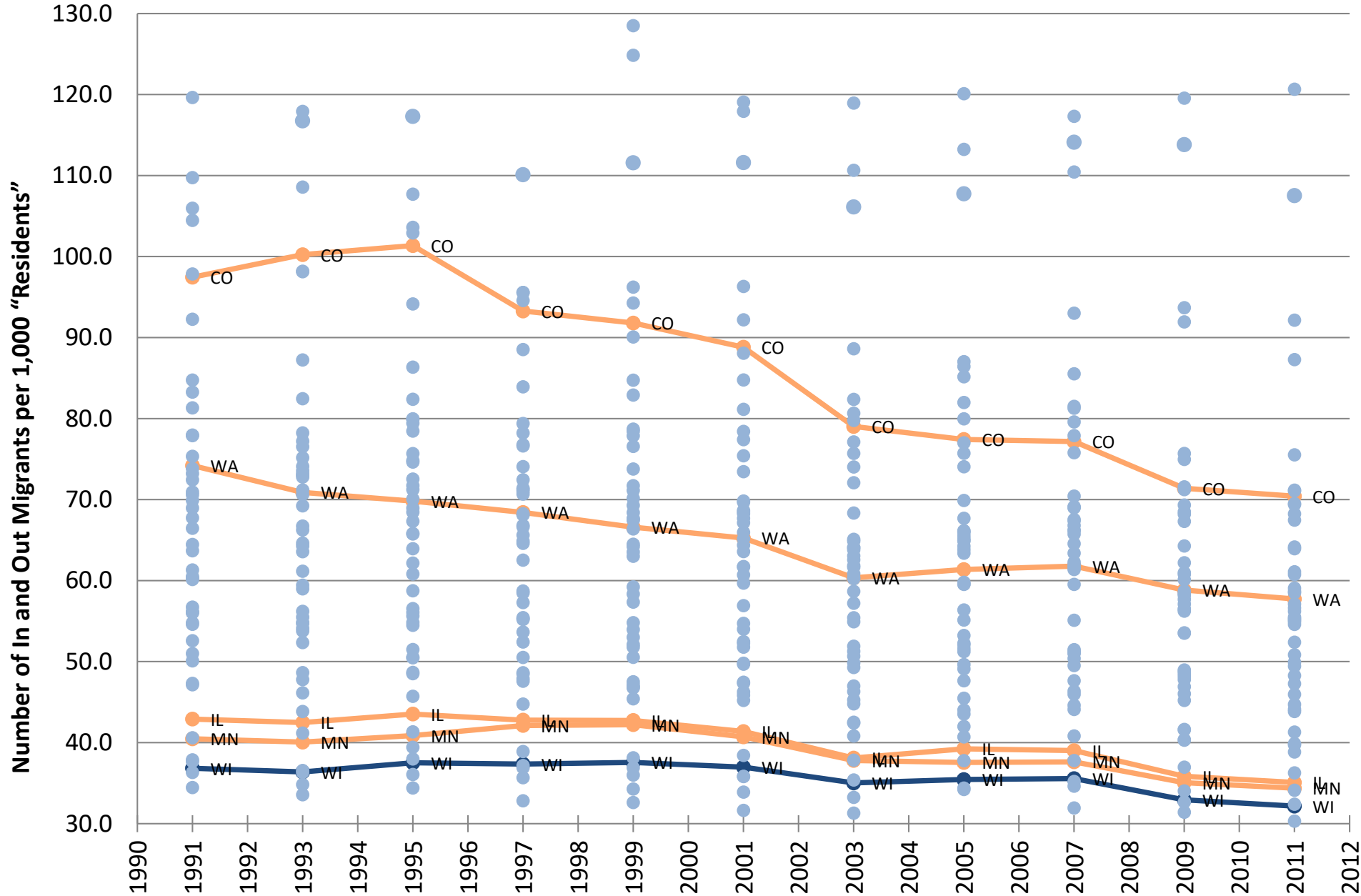
State Domestic Gross Migration Rates (Churn) – 1990 to 2011



Source: Internal Revenue Service Migration Data and Author's Calculations

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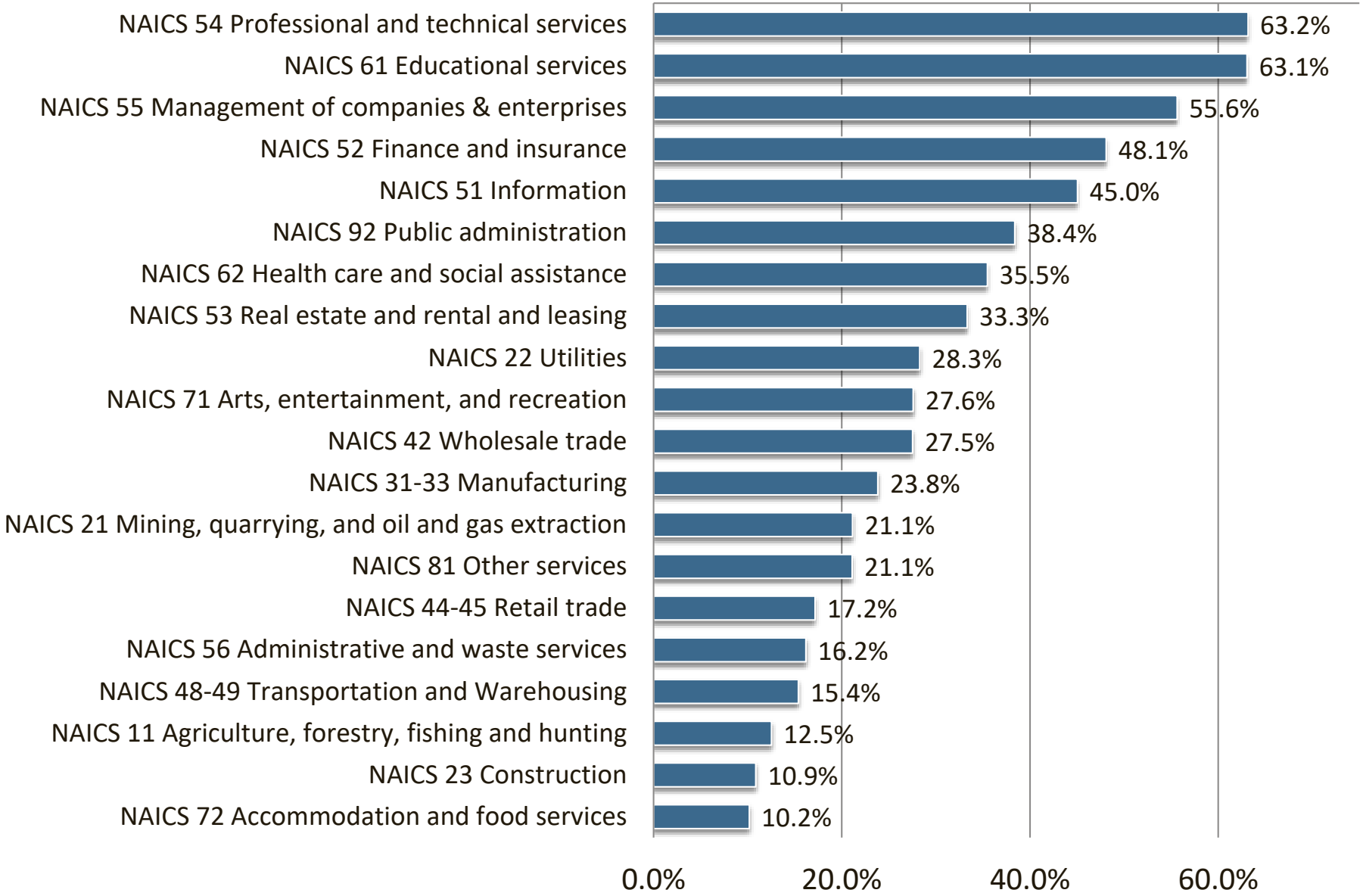
Negative Net Migration of College Graduates from Wisconsin is not a new Phenomenon (and Largely not Driven by Out-Migration).

" Several of the state's citizens have pointed to these numbers or similar data as a sign that Wisconsin is experience a 'brain drain' – an alarming net loss of its educational capital (Drilias 1985). **However, while the data clearly do signal a net loss of more highly educated persons, the use of emotive expressions such as 'brain drain' very likely is exaggerating the importance of what may also be viewed as a relatively small net migration difference**."

"Furthermore… there is evidence in detailed migration rates that Wisconsin is among the top third of states in the ability to retain college graduates. **The net loss results largely from Wisconsin's inability to attract more college educated in-migrants to the state during the 1975-80 period** ."

Voss, P.R. (1988) *State Policy Choices: The Wisconsin Experience*. Sheldon H. Danziger and John F. Witte eds. University of Wisconsin Press, Madison, WI.

Understanding Structural Conditions - National Share of Industry Sector Employees with a Bachelor's Degree or Higher



Source: U.S. Census Bureau 2011-2015 American Community Survey PUMS and Author's Calculations – Extracted from IPUMS
Values are subject to margins of error.

Understanding Structural Conditions - Wisconsin Employment and Average Wage Location Quotients by Industry Sectors with the Greatest Share of Employees with a College Degree

NAICS and Industry Description	% Bachelors or Higher	Employment LQ	Average Wage LQ
54 Professional and technical services	63.2%	0.60	0.90
61 Educational services	63.1%	0.86	1.13
55 Management of companies and enterprises	55.6%	1.54	0.97
52 Finance and insurance	48.1%	1.05	0.84
51 Information	45.0%	0.87	0.83
92 Public administration	38.4%	0.97	0.87
62 Health care and social assistance	35.5%	1.00	1.11
53 Real estate and rental and leasing	33.3%	0.60	0.85
22 Utilities	28.3%	0.74	1.12
71 Arts, entertainment, and recreation	27.6%	0.93	0.89
42 Wholesale trade	27.5%	1.06	1.00
31-33 Manufacturing	23.8%	1.88	0.99
21 Mining, quarrying, and oil and gas extraction	21.1%	0.25	0.70
81 Other services, except public administration	21.1%	0.95	0.91

Source: U.S. Census Bureau 2011-2015 American Community Survey PUMS and Author's Calculations – Extracted from IPUMS Values are subject to margins of error.

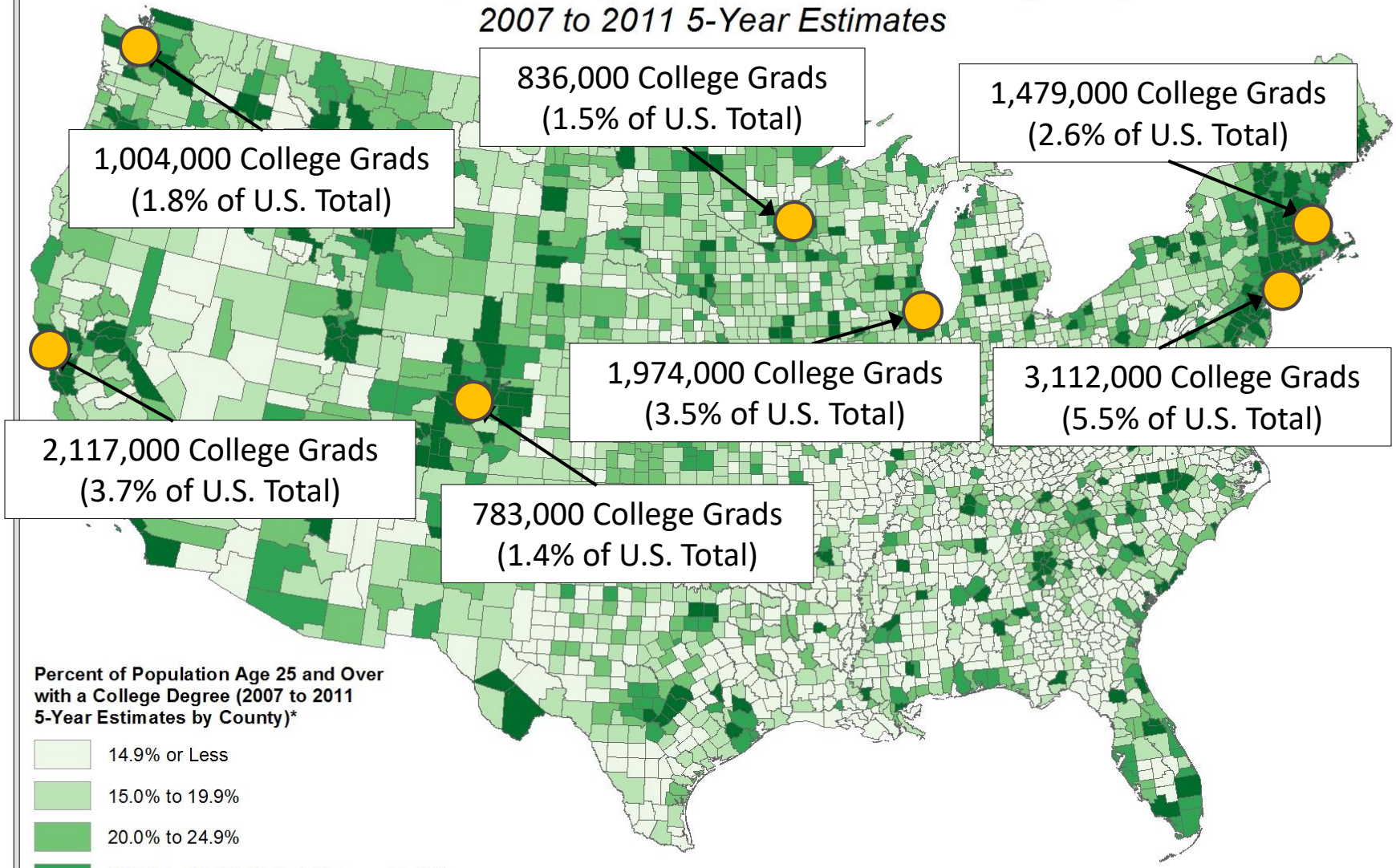
Understanding Structural Conditions - Wisconsin Employment and Average Wage Location Quotients by Manufacturing Sub Sectors with the Greatest Share of Employees with a Bachelor's Degree or Higher

NAICS and Industry Description	% Bachelors or Higher	Employment LQ	Average Wage LQ
334 Computer and electronic product manufacturing	48.3%	0.89	0.67
325 Chemical manufacturing	40.8%	1.07	1.02
324 Petroleum and coal products manufacturing	32.1%	0.20	0.16
339 Miscellaneous manufacturing	30.0%	1.17	1.09
312 Beverage and tobacco product manufacturing	28.7%	0.85	0.79
336 Transportation equipment manufacturing	27.4%	0.82	0.8
335 Electrical equipment and appliance mfg.	26.6%	3.12	3.74
333 Machinery manufacturing	23.4%	3.07	3.29
316 Leather and allied product manufacturing	20.2%	2.24	2.43
323 Printing and related support activities	19.2%	3.33	3.91
322 Paper manufacturing	17.5%	4.12	4.75
315 Apparel manufacturing	16.4%	0.34	0.3
327 Nonmetallic mineral product manufacturing	15.4%	1.18	1.27
331 Primary metal manufacturing	15.0%	2.15	2.16

Source: U.S. Census Bureau 2011-2015 American Community Survey PUMS and Author's Calculations – Extracted from IPUMS Values are subject to margins of error.

Percent of Population Age 25 and Over with a College Degree

2007 to 2011 5-Year Estimates



Percent of Population Age 25 and Over with a College Degree (2007 to 2011 5-Year Estimates by County)*

- 14.9% or Less
- 15.0% to 19.9%
- 20.0% to 24.9%
- 25.0% to 29.9% (United States = 28.2%)
- 30.0% or More

*Important Note: The values for tracts shown in different classes may not be statistically different. A statistical test is needed to make such a determination.

Source: U.S. Census Bureau, 2007-2011 American Community Survey 5-Year Estimates. Data are based on a sample and are subject to sampling variability and nonsampling error.

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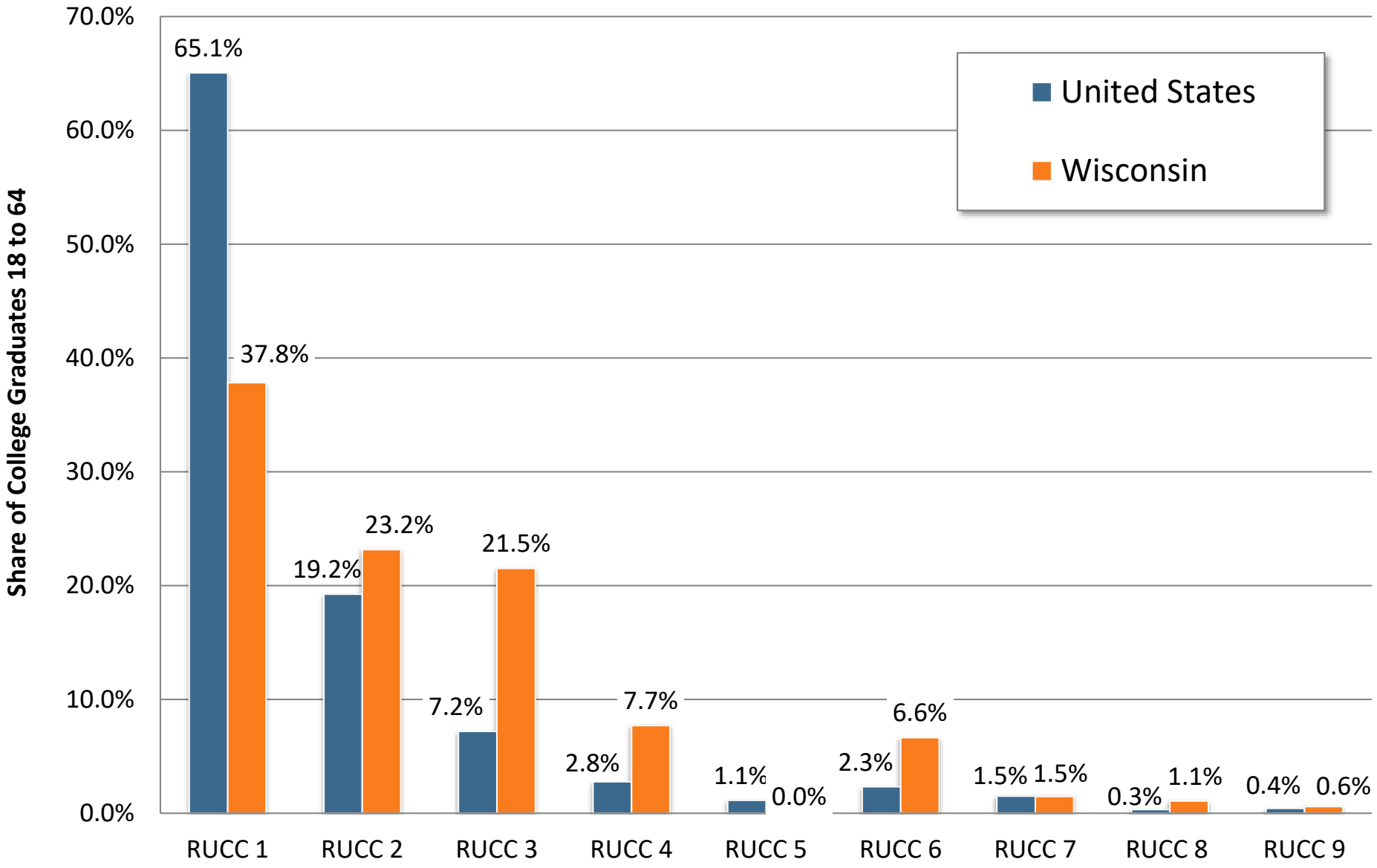
Understanding Structural Conditions – Distribution of College Graduates Age 18 to 64 by Rural-Urban Continuum Code (2011-2015 5-Year Average)



Source: U.S. Census Bureau 2011-2015 American Community Survey and Author's Calculations. Values are subject to margins of error.

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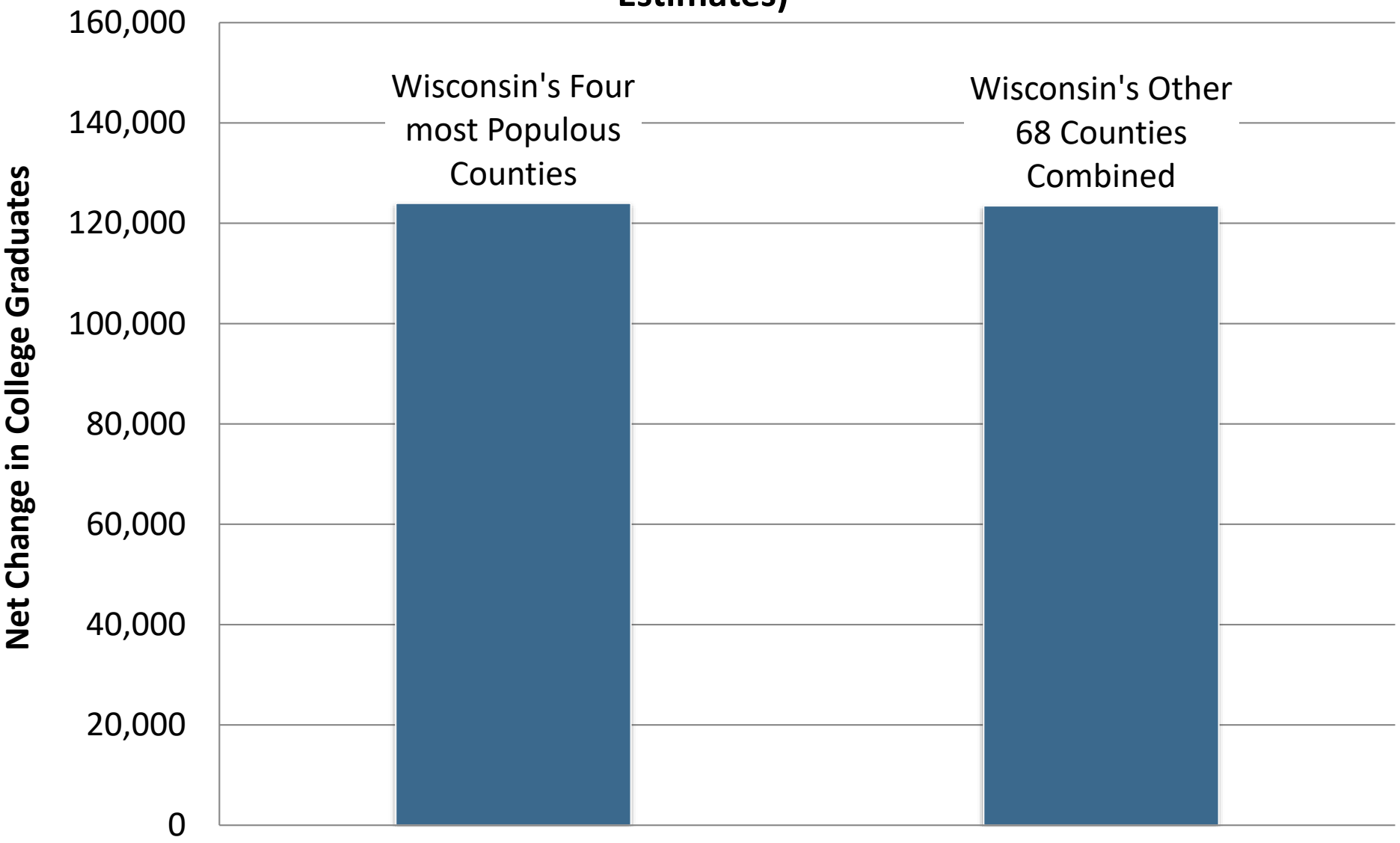
Understanding Structural Conditions – Wisconsin Net Change in College Graduates Age 18 to 64 (2000 and 2011-2015 5-Year Estimates)



Source: U.S. Census Bureau 2011-2015 American Community Survey and Author's Calculations. Values are subject to margins of error.

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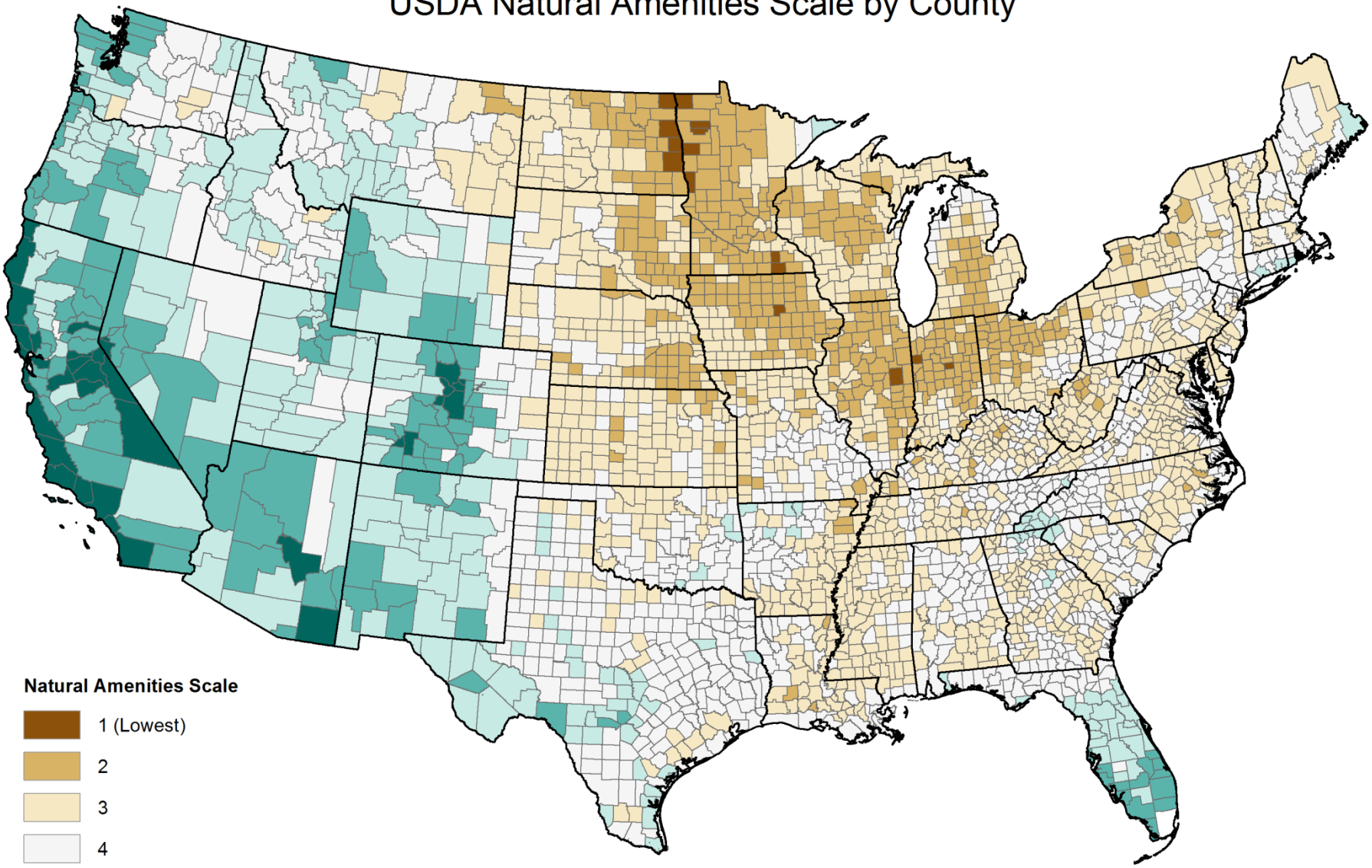
USDA Natural Amenities Scale by County



Natural Amenities Scale

- 1 (Lowest)
- 2
- 3
- 4
- 5
- 6
- 7 (Highest)

The natural amenities scale is a measure of the physical characteristics of a county area that enhance the location as a place to live. The scale is constructed by combining six measures of climate, topography, and water area that reflect environmental qualities most people prefer. These measures are warm winter, winter sun, temperate summer, low summer humidity, topographic variation, and water area (Source USDA)

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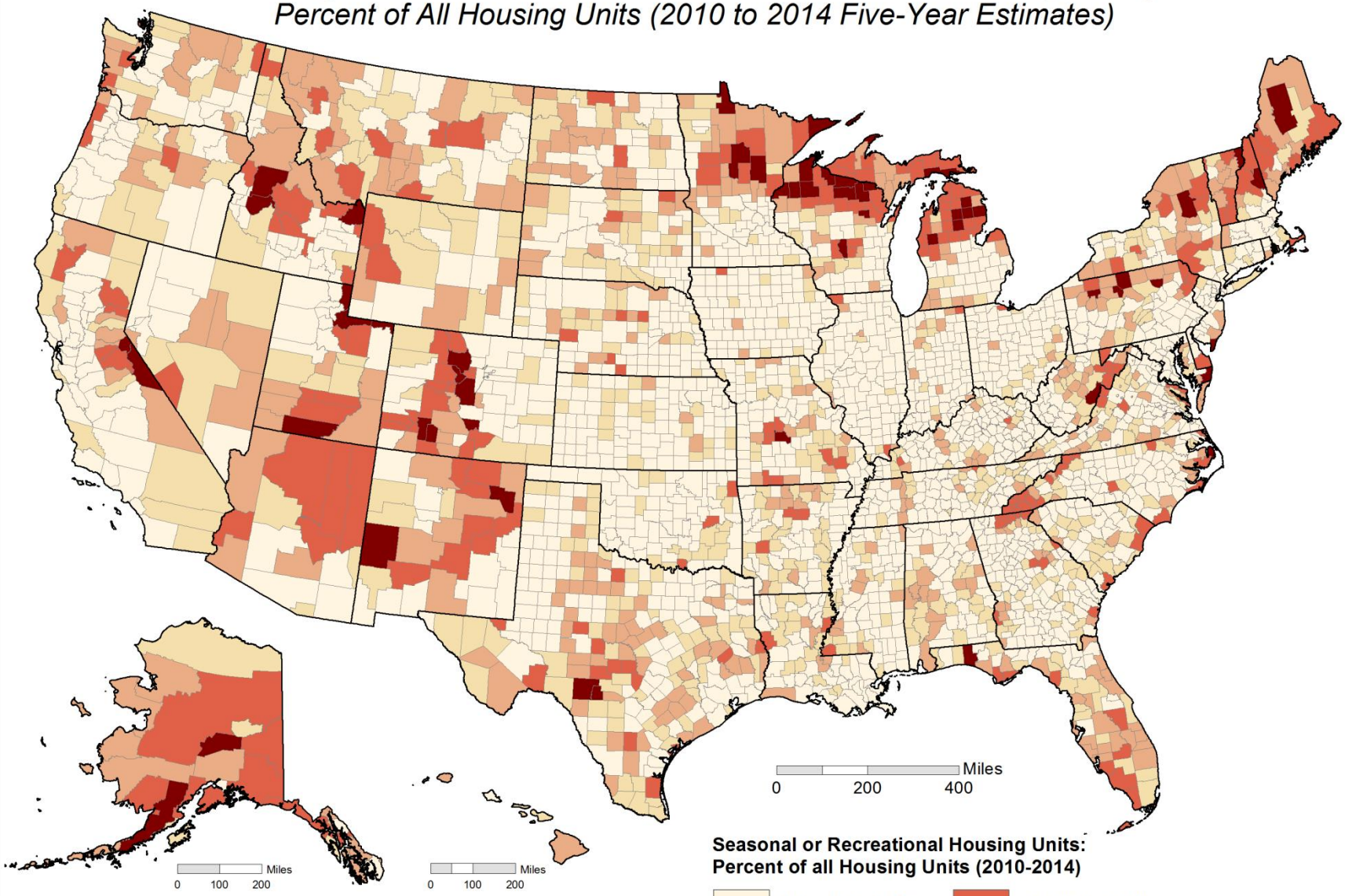
Housing Units for Seasonal, Recreational or Occasional Use by County

Percent of All Housing Units (2010 to 2014 Five-Year Estimates)



Data Source: U.S. Census Bureau 2010-2014 American Community Survey. Numbers are subject to a margin of error. Housing units for seasonal, recreational, or occasional use are vacant units used or intended for use only in certain seasons or for weekends or other occasional use throughout the year. Seasonal units include those used for summer or winter sports or recreation, such as beach cottages and hunting cabins. Seasonal units also may include quarters for such workers as herders and loggers.Interval ownership units, sometimes called shared-ownership or time-sharing condominiums, are included here.

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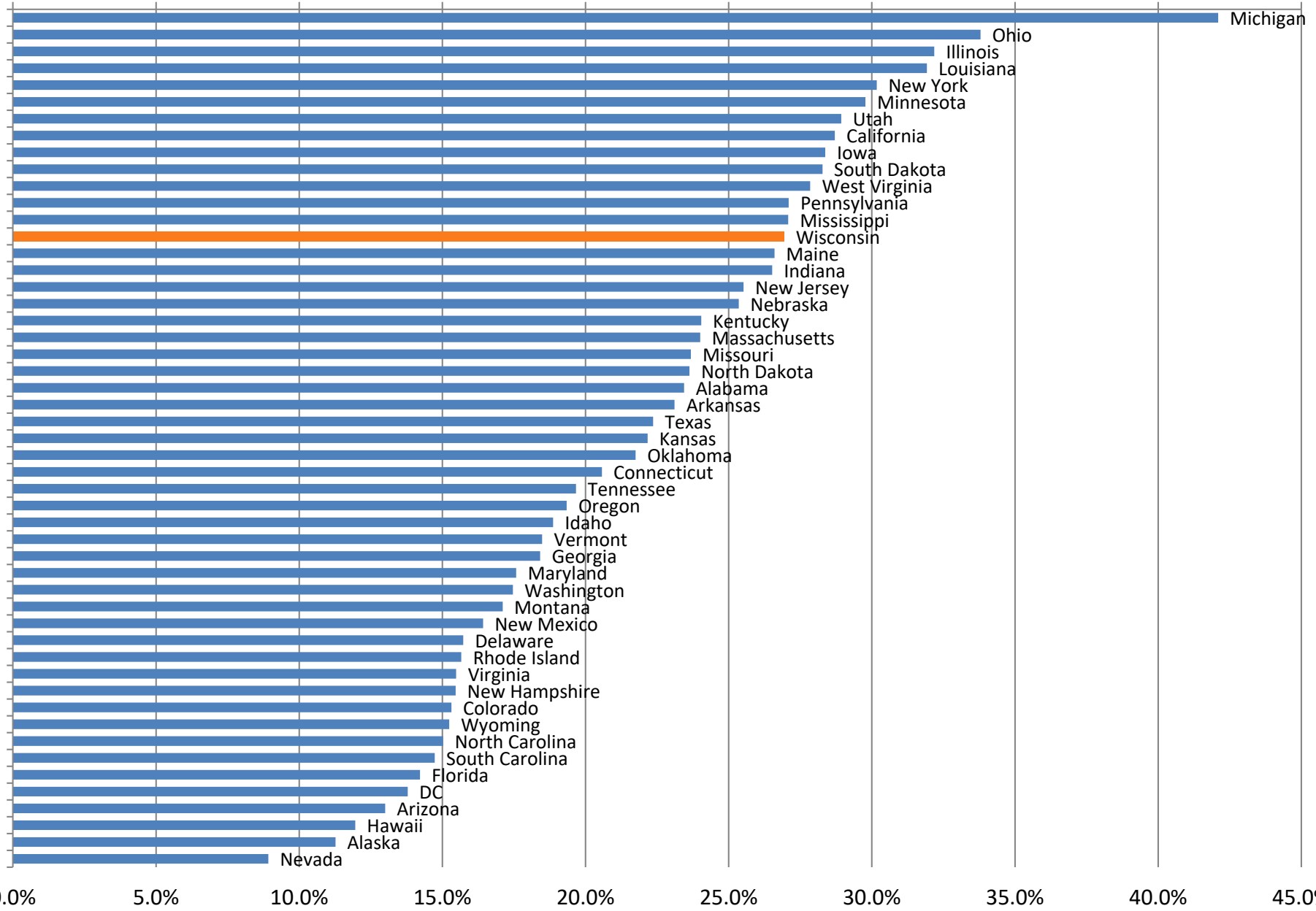
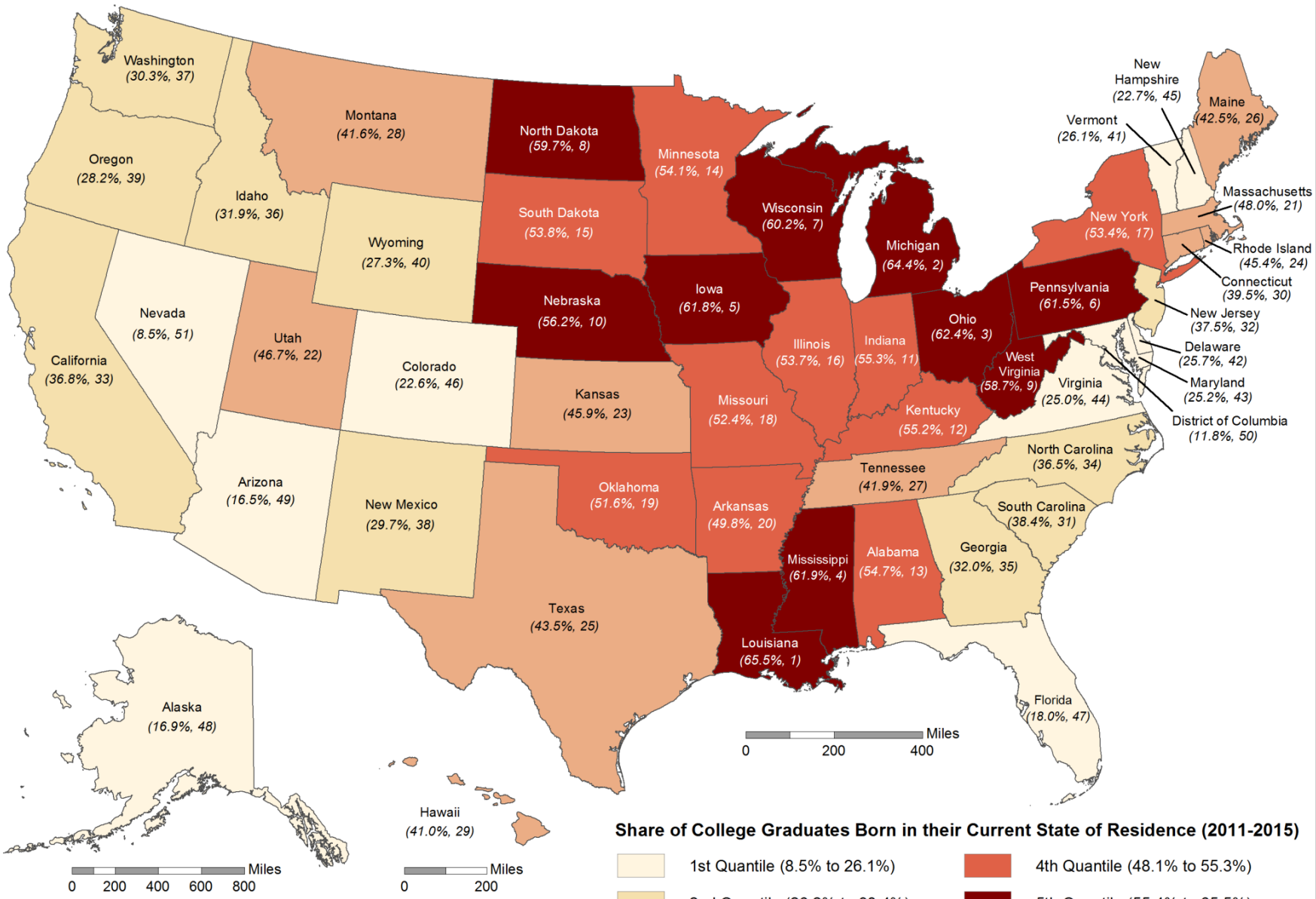
Do They Return? Domestic In-Migration by State 2010-2014
Share of In-Migrants who were also Born in the State



Source: U.S. Census Bureau 2010-2014 American Community Survey PUMS and Author's Calculations – Extracted from IPUMS

Share of College Graduates Born in Their Current State of Residence - 2011-2015



Share of College Graduates Born in their Current State of Residence (2011-2015)

1st Quantile (8.5% to 26.1%)	4th Quantile (48.1% to 55.3%)
2nd Quantile (26.2% to 38.4%)	5th Quantile (55.4% to 65.5%)
3rd Quantile (38.5% to 48.0%)	(60.2%, 7) Share, Rank

Sources: U.S. Census Bureau 2011-2015 American Community Survey 5-Year Estimates.
Note: Some differences among states may not be statistically significant

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Sometimes we do not Reach a Definitive Conclusion, but Instead Provoke New Questions

- Given historical migration patterns, what is Wisconsin's true ability to increase in-migration rates?
- Given Wisconsin's out-migration rates, how much room is there to improve retention?
- Given Wisconsin's churn rates, do we need to emphasize other strategies that reduce dependence on labor availability?
- Is the state the appropriate geographic level for policy development and implementation?
- Does ethnocentrism or a potential preference for "in-group" members influence failed migrations to Wisconsin?
- An altered narrative about amenities and quality of life?
- Does migration churn influence our entrepreneurial propensity?

Methods for Disseminating Information

***By the Numbers* Presentations** – Approximately 60 minute discussions prompted by a series of charts, tables and maps to help stakeholders on a topic of interest. Over 50 presentations have been given to state agencies, non-profit organizations, economic development entities, etc.

Wisconsin Economy Series – Developed in partnership with UW-Madison's Department of Agricultural and Applied Economics, and furthered by our EDA University Center designation, the series includes an in-depth analysis of a topic, followed by a policy brief and a series of factsheets.

Committee Connect Partnership - Committee Connect is a program of UW-Madison's La Follette School of Public Affairs. It provides state legislators with a single point of access to UW–Madison researchers early in the policymaking process.

Contact Information

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